

# METHODS AND APPARATUS FOR IMPLEMENTING A CRYPTOGRAPHY ENGINE

## Abstract of the Disclosure

5           Methods and apparatus are provided for implementing a cryptography engine  
for cryptography processing. A variety of techniques are described. A cryptography  
engine such as a DES engine can be decoupled from surrounding logic by using  
asynchronous buffers. Bit-sliced design can be implemented by moving expansion  
and permutation logic out of the timing critical data path. An XOR function can be  
10       decomposed into functions that can be implemented more efficiently. A two-level  
multiplexer can be used to preserve a clock cycle during cryptography processing.  
Key scheduling can be pipelined to allow efficient round key generation.

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